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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HABTE, ZEWDU

ART UNIT PAPER NUMBER

2661

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,153

Applicant(s)

SMITH ET AL.

Examiner

Zewdu Habte

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-3, 8 and 12 is/are rejected.
- 7) ☒ Claim(s) 4-7, 9 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 13 is objected to because of the following informalities:

In claim 13 line 1, "protocol of claim 0" should be changed to –protocol of claim 12–.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 8, and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Fredrik (Fredrik Christiansson, *A Distributed, Mobile Positioning System for Wireless, Handheld Devices*, June 2000, pp. 1-97).

As to claim 1, Fredrik discloses a method of determining the position of a wireless device using a wireless network (page 29, section 3.3, a method of determining the position of the actual PDA by using two steps; first, using the participating base stations, the time difference between the received message by each base station in the network estimated; second, the estimated time difference between the base stations transformed into equations to come up with the PDA's actual position) having a plurality of receiver/correlators, each

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receiver/correlator being positioned at a fixed location in the (implicitly taught because each base station is capable of receiving signal and performing a cross-correlation of the incoming signal with a registered bit pattern), the method comprising: receiving a position request from the wireless device at a first receiver/correlator and recording the receive time (page 33, stage 2, signal transmitted from the PDA; page 34, stage 3, transmitted signal reaches the base stations around the PDA at least three different times; according to Fig. 6, the closest base station to reach the PDA signal is the base station with record time 30, first receiver); receiving the same position request from the wireless device at a second receiver/correlator and recording the receive time (Fig. 6, the second closest base station to reach the PDA signal is the base station with record time 36, second receiver); receiving the same position request from the wireless device at a third receiver/correlator and recording a receive time (Fig. 6, the third closest base station to reach the PDA signal is the base station with record time 40, third receiver); using the receive time recorded at the first receiver/correlator, the receive time recorded at the second receiver/correlator, and the fixed locations of each receiver/correlator to determine the position of the wireless device (page 35, stage 4, the receive value is stored in a register for later processing in each base station; page 35, stage 6, this information is sent from each base station to the server; page 35, stage 7, the server calculates the position of the PDA by using the information provided by base stations); and transmitting a position information packet back to the wireless device indicating

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the global position of the wireless device (page 36 @12, return position information to the requesting PDA).

As to claim 2, Fredrik discloses the method of claim 1, further comprising the steps of: receiving the same position request from the wireless device at a third receiver/correlator and recording a receive time (Fig. 6, the third closest base station to reach the PDA signal is the base station with record time 36, third receiver); and using the receive time recorded at the first receiver/correlator, the receive time recorded at the second receiver/correlator, the receive time recorded at the third receiver correlator and the fixed locations of each receiver/correlator to determine the position of the wireless device (page 14, lines 8-9).

As to claim 3, Fredrik discloses the method of claim 1, further comprising the step of: synchronizing all the receiver/correlators in the plurality such that an internal clock in each receiver/correlator is synchronized and syntonized, thereby indicating the same time information (page 21, section 3.2.1.3).

As to claim 8, Fredrik discloses a system for identifying the position of a wireless device and transmitting that position back to the wireless device (page 29, section 3.3, a method of determining the position of the actual PDA by using two steps; first, using the participating base stations, the time difference between the received message by each base station in the network estimated; second, the estimated time difference between the base stations transformed into equations to come up with the PDA's actual position), the system comprising: a plurality of receiver/correlators (page 14, lines 1-5, the base stations are

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equipped with receiver/correlators hence receiving and cross-correlation techniques used at the base stations), each receiver/correlator being positioned at a fixed location in the network for receiving position request packets from the wireless cellular device (Fig. 15 @ 2 & 3, PDA sends the signal and the fixed base stations receive the signal), thereby generating a trigger signal each time a position request packet is received (Fig. 15 @ 3, signal hits the base station and triggering takes place), the trigger signal used to record a Local time, as indicated by an internal clock, at which the position request packet is received (Fig. 15 @ 4, extract counter/time value), and generating timing packets which include information about received position request packet, including time received (page 35 @ 6, the time value and the broadcast sequence number is sent from the base station to the server); and a central server for receiving the timing packets from the plurality of receiver/correlators and determining the position of the wireless device using the information in various timing packets (page 35 @ 7, at the server, data collected from the base stations and position of the PDA is calculated).

As to claim 12, Fredrik discloses a packet based communications protocol for receiving a position request from a wireless device and transmitting position information back to the wireless device (page 29, section 3.3, a method of determining the position of the actual PDA by using two steps; first, using the participating base stations, the time difference between the received message by each base station in the network estimated; second, the estimated time difference between the base stations transformed into equations to come up with

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the PDA's actual position), the packet based communications protocol comprising: a position request packet which is transmitted from the wireless device to a receiver/correlator (Fig. 15 @2, PDA sends signal) which includes a header having a known bit pattern which identifies the packet as a position request packet (Fig. 15 @ 3, signal hits base station and triggering takes place; since Fig. 15 is describing Bluetooth link, Bluetooth's packet header has a 4-bit Type field to indicate the type of packet that has been sent) and a field for identifying the wireless device from which it was transmitted (Fig. 15 @ 5, identify 3-bit PDA address); and a position information packet which is transmitted from a central server to the wireless device which includes a header which identifies the packet as a position information packet (implicitly taught because, Bluetooth's packet header has a 4-bit Type field to indicate the type of packet that has been sent), a field for identifying the central server from which it was transmitted (page 35, @ 6, lines 5-7, the piconet only can have one master and the address of that master is known; when the server returns the requested address to the wireless device, it is consider a master in a piconet, while the receiver of the message is consider a slave), an information field identifying the wireless device for which it is intended (implicitly taught because a packet header in a Bluetooth has a 3-bit destination address field), and a field identifying the position of the wireless device, as determined by the central server (page 36, pa. 5, the server returns the position of to the requesting PDA).

Allowable Subject Matter

Claims 4-7, 9 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10-11 allowed.

Claim 10 is allowable because the prior art of record fails to teach, in combination with other claim limitations,

As to claim 10, a synchronization packet detector for: detecting synchronization packets which are used to synchronizing and syntonizing the internal clock; and detecting position request packets from the wireless cellular device and generating a trigger signal each time a position request packet is received, the trigger signal used to record a local time on the internal clock at which the position request packet is received.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zewdu Habte whose telephone number is 571-272-3115. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KENNETH VANDERPUYE
PRIMARY EXAMINER

Zewdu Habte (Zed)
Examiner
Art Unit 2661

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